

ABSTRACT OF THE DISCLOSURE

The present invention provides aqueous compositions for cleaning integrated circuit substrates. Specifically, in the cleaning of an integrated circuit substrate, disclosed is a method for removing the by-products of the high-k dielectric dry etch process from the integrated circuit substrate, the method including: contacting the integrated circuit substrate with an aqueous composition including an amount, effective for the purpose of a (a) hydrogen fluoride, followed by (b) a mixture of hydrogen peroxide with a compound selected from the group consisting of ammonium hydroxide, hydrochloric acid and sulfuric acid.